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Encephalitis in the Missouri River Basin

II. Studies on a Focal Outbreak of Encephalitis in North Dakota

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During August 1949, an outbreak of encephalitis occurred in Barnes County, North Dakota.¹ Poliomyelitis was present in the area also, being part of a widespread outbreak in the State during the summer and fall of 1949. Although frank and abortive attacks of poliomyelitis were experienced, a clinically different type of central nervous system illness appeared during the last weeks of July and the first 2 weeks of August. In contrast to poliomyelitis, adults were attacked and experienced illness which was characterized best as encephalitis. This report briefly describes the type of clinical illnesses and some studies made to identify the etiologic agent(s) responsible for illness in patients sick with encephalitis.

Materials and Methods

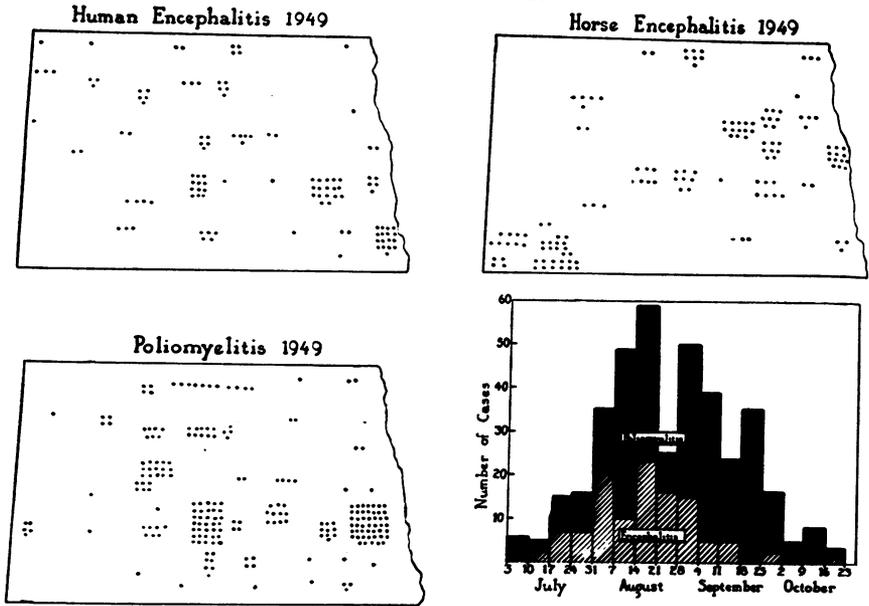
Poliomyelitis and encephalitis in North Dakota. In the course of the outbreak of poliomyelitis, 451 cases were reported in the State (population 1950, 616,185). During the same period, 126 cases of encephalitis were recorded. The geographical and seasonal distribution of these reported cases appear in figure 1. Inasmuch as it is known that an appraisal of cases which are mild encephalitis and abortive poliomyelitis is difficult, these data must be considered as subject to error.

Poliomyelitis and encephalitis in Barnes County. The geographical distribution of poliomyelitis and encephalitis in Barnes County (population 1950, 16,822) appears in figure 2. Seventeen cases of encephalitis and 14 cases of poliomyelitis were reported. All of these illnesses were reported during the period July 15–August 27. Since a number of patients reported as having poliomyelitis were not paralyzed, some

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NORTH DAKOTA



Cases Reported by Counties

Figure 1. The geographical and seasonal distribution of poliomyelitis and encephalitis in North Dakota in 1949.

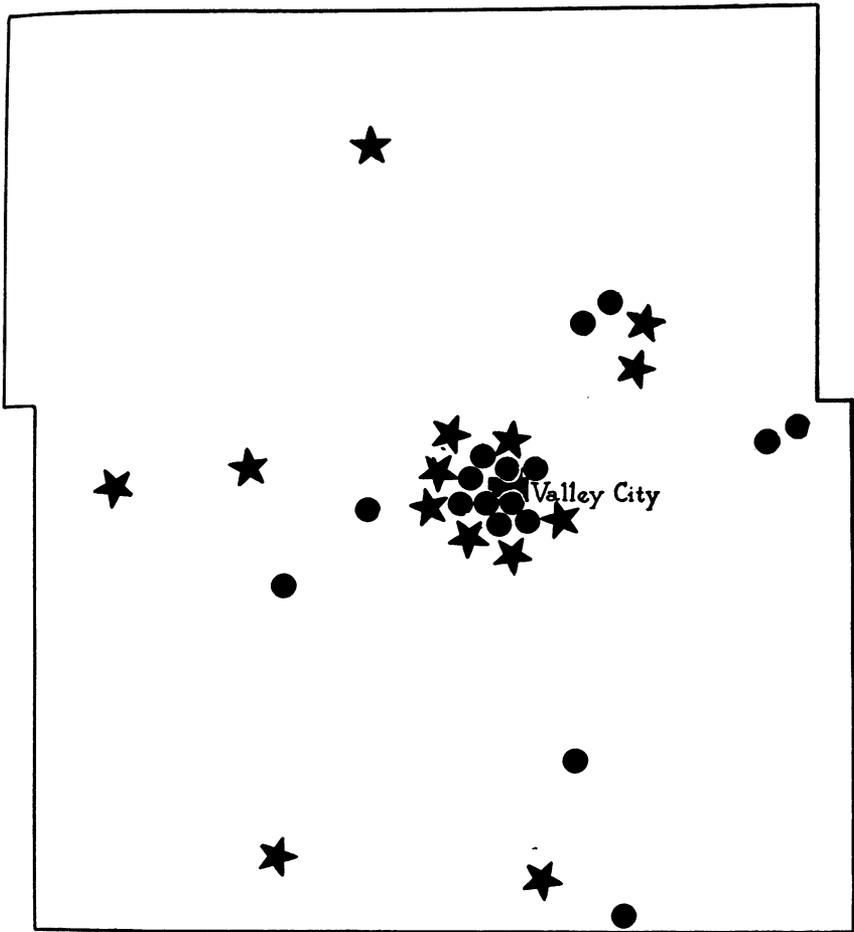
probably experienced mild attacks of encephalitis. That the latter possibility is a likely one will appear in adjunct data.

Clinical considerations. Between July 26 and August 15, 1949, 13 recognized human cases of encephalitis were observed in Barnes County. All of the patients were adults; there were 4 females and 9 males. There were three deaths. Necropsies were not performed.

Some data concerning 12 of these patients appear in table 1. One patient died prior to our arrival; information concerning the illness was not obtained. The clinical features of the illnesses were sudden onset with fever (101° to 103° F.), sensations of chilliness, headache, nausea, vomiting, dizziness, and muscular pains, particularly involving the chest. Headache, frontal in distribution, was severe and aggravating. There was stiffness of the neck and back. The spinal fluids had increased cell counts (20 to 300 cells mm^3). These were chiefly lymphocytes.

Specimens collected from human cases. Whole blood, serum, cerebrospinal fluid, oropharyngeal exudate, and feces were obtained from five acutely ill patients. These materials were stored immediately on dry ice and transported to the laboratory. Serums from these five patients and others (see table 1) were obtained in August and October 1949, and in March 1950.

BARNES COUNTY



Stars = Poliomyelitis

Dots = Encephalitis

Figure 2. The geographical distribution of poliomyelitis and encephalitis in Barnes County, North Dakota, in 1949.

Specimens collected in the field. A history of an epizootic in domestic animals was not obtained at the time of investigation. Later it was learned that horses in the area and elsewhere in the State (fig. 1) had experienced encephalitis during the summer. Serums were not obtained from horses. Mosquitoes collected August 14 to 15, 1949, in the area of Valley City were as follows:

<i>Aedes vexans</i>	186	<i>Aedes dorsalis</i>	68
<i>Aedes triseriatus</i>	2	<i>Culex tarsalis</i>	81
<i>Aedes nigromaculis</i>	18	<i>Culex</i> , species unidentified....	3

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Table 1. Notes on clinical findings and specimens collected from patients with encephalitis

Patient	Age	Sex	Onset	Symptoms	CSF ¹	Specimens collected				
						Blood	OP ²	Stool	Serum	
									1	2
B. R.	24	M	8/10/49	Headache, stiff neck.....	±	8/13	8/13	8/13	8/13	3/25/50
E. C. P.	33	F	7/26/49	Headache, stiff neck.....	+	8/13	-----	8/13	8/13	10/24/49
E. G.	59	M	8/11/49	Fever, headache, backache, stiff neck.	?	8/13	8/13	8/13	8/13	3/25/50
G. K.	64	M	7/30/49	Headache, confusion lethargy, depression.	+	8/13	-----	-----	8/13	3/25/50
R. S.	20	M	8/13/49	Fever, headache, backache....	+	8/14	8/14	8/14	8/14	3/25/50
R. K.	38	M	8/4/49	Fever, chills, diplopia; died 8/10/49.	+	-----	-----	-----	-----	-----
T. W.	26	M	8/4/49	Headache, nausea, vomited, stiff neck, backache.	+	-----	-----	-----	8/14	3/25/50
I. L.	27	F	8/1/49	Headache, nausea, stiff back and neck.	+	-----	-----	-----	8/14	10/24/49
R. F.	25	M	8/3/49	Headache, stiff back and neck.	+	-----	-----	-----	-----	3/25/50
A. K.	29	M	8/1/49	.....do.....	±	-----	-----	-----	-----	3/25/50
P. M.	22	F	8/3/49	Fever, headache, nausea, vomited, stiff neck.	±	-----	-----	-----	-----	-----
A. E.	32	M	8/13/49	Headache, chest pain; died....	+	8/14	8/13	8/14	8/14	-----

¹ CSF=13 to 350 cells; average 106 cells/mm.³; chiefly lymphocytes.

² OP=oropharyngeal exudate.

In addition, mites were obtained as follows:

Source of mites	Species
Chicken house.....	<i>Dermanyssus gallinae</i>
Sparrow nest.....	<i>Dermanyssus gallinae</i>
Sparrow nest.....	{ <i>Dermanyssus gallinae</i> <i>Bdella</i> species
Nest material.....	<i>Pteronyssus</i> species
Nest material.....	{ <i>Liponyssus sylvianum</i> <i>Pteronyssus</i> species

Tests for viruses. Cerebrospinal fluids and whole blood samples were inoculated intracerebrally into (a) suckling mice, (b) 3-week-old CFW Swiss mice, (c) young adult guinea pigs, and (d) rhesus monkeys (*Macaca mulatta*). Oropharyngeal exudates were prepared for inoculation according to a method described previously (1). Fecal samples were emulsified in distilled water (4 parts) and centrifuged in an angle centrifuge (5000 rpm for 30 minutes at 4° C.) Materials obtained from the throat and intestine were inoculated into (a) suckling mice, (b) young Swiss mice, (c) guinea pigs, (d) hamsters, and (e) rhesus monkeys. Usually the intracerebral portal was used, although intranasal (2), intraperitoneal (3), and subcutaneous portals were used also.

Tests for antibodies. Neutralization (4) and complement fixation (5, 6, 7) tests were made with the following antigens: WEE, EEE, St. Louis, and the California² strains of encephalitis viruses, and mumps and Newcastle disease viruses.

² The California strain of virus (8) was received from Dr. W. McD. Hammon, School of Public Health, University of Pittsburgh, Pittsburgh, Pa. We are indebted to him for permitting us to include this virus in the present study.

Confirmation of positive results. Histologic studies were made of the central nervous system of animals surviving inoculation more than 48 hours. If fever or apparent illness occurred in animals, some were sacrificed and brain-to-brain passages made. The identification of viruses was made on (a) successful passage in series in susceptible recipients, and (b) neutralization of the agent with previously prepared specific antiserum. Cross protection tests were made with one strain of WEE virus.

Results

Isolation of virus from human specimens. An agent causing encephalitis in mice apparently originated in the blood obtained from patient A. E. and the stool from patient R. S. In each instance virus was adapted to mice from the brain of sick guinea pigs. A résumé of history of passage appears in table 2.

Blood. Whole blood obtained early in illness from patient A. E. was used. The frozen (-70° C.) blood sample was thawed and triturated in a mortar. The blood mixture was clarified by centrifugation and the hemolysate inoculated intracerebrally into 3-day and 3-week-old mice, guinea pigs, and a rhesus monkey (table 3). Suckling mice became ill, but passage was unsuccessful. The rhesus monkey survived 3 weeks without definite clinical symptoms. Meningo-encephalitis was observed on histologic examination. Guinea pigs inoculated with blood became sick; they were sacrificed on the 6th and 7th days. Pooled brain emulsion from these guinea pigs was inoculated into eight mice and three guinea pigs. Mice remained healthy for 3 weeks. Two of three guinea pigs became sick, and were sacrificed on the 4th and 12th days, respectively. From one of these guinea pigs an agent causing encephalitis in mice was established and identified by serum neutralization as WEE virus.

Stool. Stool extract obtained early in illness from R. S. was used. The stool was emulsified in distilled water to make a 10-percent suspension (wet weight). Following preliminary centrifugation to sediment crude materials, the emulsion was further centrifuged in the cold at 5000 rpm for 30 minutes (angle centrifuge). The brownish clear fluid was bacteria free. The supernatant fluid was inoculated into infant and 3-week-old mice, guinea pigs, and a rhesus monkey. These animals, with the exception of the guinea pigs, remained healthy during 3 weeks of observation. The guinea pigs showed signs of mild illness 4 to 14 days following inoculation. They were sacrificed, and pooled brain emulsion of these pigs was passaged intracerebrally into eight mice and three guinea pigs. Mice remained healthy for 3 weeks. Two of three guinea pigs became sick and were sacrificed on the 6th and 10th days, respectively. From one of the guinea pigs an agent causing encephalitis in mice was established and identified as WEE virus.

Four months later the same stool extract was inoculated intracerebrally and intraperitoneally into two guinea pigs. These animals became ill and were observed to have tremors and weakness of the legs. They were sacrificed on the 7th and 8th days. Emulsions prepared from the brain of each of these guinea pigs failed to cause illness in 18 young Swiss mice.

The detection of WEE virus in these human milieu have been viewed by us with some reserve. First, it was hard to establish the existence of the virus as evidenced by refractoriness of mice to virus

Table 2. Detection of WEE virus in blood and stool of human beings ill with encephalitis

Human materials	History of passages			LD ₅₀ 5th mouse passage	Neutralization indices ¹	Remarks
	Tissue extracts into guinea pigs	Guinea pig CNS pools, 1st passage	Guinea pig CNS into young mice ²			
Blood ³ (A. E.)	No. 363 (survived). No. 364 Sick 4th-7th days, killed No. 365 6th-7th days.	No. 366 Sick, killed 4th day. No. 367 Sick, fever, killed 12th day. No. 368 (survived).	→10/10→5/0→6/6→30/30	10 ^{-6.5}	WEE >32,000 EEE <32 St. Louis <32	Infant mice became ill and died; some were not tested for virus. Young adult mice remained healthy.
Stool ⁴ (R. S.)	No. 348 Sick 4th-14th days, killed No. 349 14th day.	No. 369 (survived) No. 370 Sick, killed 6th day. No. 371 Sick, killed 10th day.	→9/11→16/10→→→37/37	10 ^{-1.3}	WEE >3,200 EEE 32 St. Louis 0	Negative test in mice and a rhesus monkey. Patient's serum did not neutralize this virus.

¹ Viruses were tested against antisera of known titer for WEE, EEE, and St. Louis viruses.

² CFW strains of mice were used.

³ Clot and serum were emulsified in a mortar; supernatant fluid was used following centrifugation at 1,500 rpm.

⁴ Supernatant fluid obtained by centrifugation in Swedish angle centrifuge at 5,000 rpm/30'; bacteria free. 10/10=10 died in 2 to 5 days.

NOTE: Uninoculated guinea pigs were caged in a room adjacent to one where pigs were receiving WEE virus in preparation of immune serums. A possibility, that air-borne transfer of virus to uninoculated pigs took place, cannot be eliminated. To the best of our knowledge few, if any, deaths occurred in our small (12 animals) stock guinea pig colony. Unexplained deaths among guinea pigs do occur periodically.

if present in the source of materials. Second, the clinical reaction in guinea pigs inoculated with stool materials was rather indefinite, although a single passage was all that was necessary to establish the presence of a neutrotropic agent infectious for mice. Third, patient R. S. did not develop antibodies either to homotypic or heterotypic (Cox strain) WEE virus. For these reasons the isolation of WEE virus from feces cannot be considered as conclusive evidence of its actual presence there. Although the probability that WEE virus was actually in the vascular shed of A. E., direct serologic evidence could not be established since the patient died a few days after onset of illness. Although we regard these isolations with a critical attitude, we have elected to report them because we do not know that the evidence warrants dismissing them as actual laboratory cross-infections. Further work is necessary to substantiate particularly the isolation of WEE virus from feces. Unfortunately, the human specimens of these patients have been depleted.

The results of additional tests for virus appear in table 3. With the

Table 3. Tests made to detect filtrable virus in various body milieu of patients sick with encephalitis in Barnes County, North Dakota

Host	Patient					Remarks
	B. C.	E. C. P.	E. G.	R. S.	A. E.	
Stool						
Suckling mice ¹	² 5/5	0/8	0/7	0/8	0/8	R. S.=positive isolation of virus identified as WEE.
CFW Swiss mice ³	-----	0/32	1/39	2/10	0/24	
Guinea pigs.....	0/2	0/3	² 3/3	1/3; P=+	0/3	
Rhesus monkeys.....	0/1	-----	0/1	0/1	0/1	
Oropharyngeal exudate						
CFW Swiss mice.....	5/23; P=0	-----	0/2	0/1	² 10/10	Monkeys on histology show mild meningo-encephalitis.
Guinea pigs.....	0/1	-----	0/1	0/6	-----	
Rhesus monkeys.....	1/1; P=0	-----	1/1	1/1; P=0	1/1; P=0	
Blood						
Suckling mice.....	-----	-----	-----	0/5	3/6; P=0	A. E. positive isolation of virus identified as WEE. Monkey=meningo-encephalitis. CSF=287 cells/mm. ³ on 14th day.
CFW Swiss mice.....	0/15	-----	0/15	0/18	0/10	
Guinea pigs.....	2/2; P=0	-----	2/2; P=0	1/3; P=0	2/3; P=+	
Rhesus monkeys.....	-----	-----	-----	-----	1/1; P=0	
Cerebrospinal fluid						
CFW Swiss mice.....	-----	-----	-----	0/15	0/8	Monkey=meningo-encephalitis. CSF=96 cells/mm. ³ on 15th day.
Guinea pigs.....	-----	-----	-----	0/1	-----	
Rhesus monkeys.....	-----	-----	-----	0/1	1/1	

¹ CFW strain.

² Deaths due to bacterial contamination.

³ CFW strain 3 weeks of age.

0/8=none died of eight inoculated during 21 to 30 days of observations; deaths after 24 hours are recorded only.

P=passage into 2 guinea pigs and/or 10 Swiss mice, or suckling mice.

exception of an imprint of mild encephalitis in rhesus monkeys following inoculation of oropharyngeal exudate and blood, all other efforts to detect virus in various body milieu were negative. All tests made in suckling mice were negative, thereby excluding the likelihood that Coxsackie virus (9) was the offending agent. Also the tests made in young mice and guinea pigs, including blind passages, bore negative results, thereby eliminating lymphocytic choriomeningitis. Poliomyelitis virus may be excluded on the basis of tests with stool and oropharyngeal specimens, for the monkeys inoculated with these specimens failed to develop the clinical disease or to demonstrate characteristic histologic lesions. These last results are in contrast to the ease with which poliomyelitis virus was detected in patients diagnosed as having poliomyelitis during the same outbreak, but from a neighboring county. The results of these tests appear in table 4.

Table 4. Tests made to detect poliomyelitis virus in stools from patients ill with frank poliomyelitis in Bismarck, N. Dak.

Patient material	Host	Portals	Presence or absence of poliomyelitis virus			
			Original passage	Number additional passages	Tests in rodents	Histologic lesions
W Stool.....	<i>M. mulatta</i>	Intraperitoneal and intranasal.	+	4	Negative....	+
L Stool.....	.....do.....	.....do.....	+	4	.....do.....	+

It has been noted above that subclinical encephalitis was found in rhesus monkeys inoculated intracerebrally with oropharyngeal exudate, blood, and cerebrospinal fluid. The clinical course was mild. The temperature remained normal. Excitement and ataxia were inconstant findings. Cerebrospinal fluid obtained from two or three monkeys showed an increased cell count (96 and 287 cells; about half were lymphocytes). Histologically, there was mild meningo-encephalitis. Lesions were focal and present in midbrain and cortical areas. Neuronal damage and perivascular collars of round cells were present in scattered foci. The chorioid plexuses and the anterior horn cells were undamaged. Passage of apparently infected monkey brain and cerebrospinal fluid into monkeys and mice provided negative clinical and histologic results.

The serologic status of human cases. The results of some serologic studies made with acute and convalescent serums obtained from nine patients appear in table 5. Two of the nine patients had a significantly elevated level of serum antibody neutralizing WEE virus, indicating that these individuals had experienced an attack of western equine encephalitis. One patient (E. G.) had a 400-fold increase in antibody titer. The other patient (G. K.) did not have a demonstrable rise in

Table 5. Results of neutralization and complement fixation tests with serums obtained from encephalitis patients

Patient	Neutralization tests								Complement fixation			
	WEE		EEE		St. Louis		California		Mumps		NDV	
	A	C	A	C	A	C	A	C	A	C	A	C
E. G.	10	4,000	-----	<32	-----	<32	-----	<10	0	0	0	0
G. K.	10,000	3,000	-----	<32	-----	<32	-----	<10	0	0	0	0
I. L.	10	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
E. C. P.	10	-----	-----	-----	-----	-----	-----	-----	-----	-----	0	0
R. F.	10	10	-----	<32	-----	<32	-----	<10	1:4	1:8	0	0
A. K.	10	10	-----	<32	-----	<32	-----	<10	0	0	0	0
B. R.	10	-----	-----	-----	-----	-----	-----	<10	>1:16	>1:16	0	0
R. S.	10	10	10	10	10	10	-----	<10	1:4	1:4	0	0
T. W.	10	10	10	10	10	10	-----	<10	0	0	0	0

1 Actually convalescent serum in 2d or 3d week of illness.

A = acute, or as early as possible after onset of illness.

C = convalescent.

neutralizing antibody titer because serum was not obtained until the 15th day following onset of illness.

In regard to the remaining patients listed in table 5, no serum antibodies were found able to neutralize WEE, EEE, St. Louis, or the California strains of encephalitis viruses or to fix complement in the presence of mumps, St. Louis, or Newcastle disease viruses. Serologic tests with Coxsackie virus have not been made because of the serologic independence of many of these strains. Since Coxsackie virus was not isolated in the outbreak, we have considered this to be likely evidence that this virus was not clinically active in this community.³

Because of a possibility of strain peculiarities, the serums of these patients were tested with both the Cox strain and the strain apparently isolated from patient A. E. Entirely similar results were obtained regardless of the strain of virus used in the neutralization tests.

Detection of virus in anthropods. A number of mosquitoes and mites were obtained in Barnes County during a 2-day period in August 1949. An agent, identified as WEE virus, was detected in two lots of mosquitoes (*Culex tarsalis*). The results of these tests appear in table 6. These strains were isolated following initial passage of mosquito extracts into mice. The mice became ill with encephalitis. The strains were passaged four times in mice and identified by serum neutralization tests as WEE virus. Each of these strains caused encephalitis in monkeys, hamsters, and guinea pigs.

The isolation of WEE virus directly from extracts prepared with two lots of *C. tarsalis* was easily accomplished in mice. In contrast, other mosquitoes, namely, *Aedes dorsalis*, *A. vexans*, and *A. nigromaculus*, on extraction failed to yield virus following intracerebral passage in mice. The small samples of mites also were tested in mice with negative results.

³ Similar studies on serum from patients seen in Bismarck, N. Dak., have provided similar results.

Table 6. Tests made on mice to detect virus in mosquitoes and mites collected during the middle of August in Valley City, N. Dak.¹

Species	Date tested	Results of tests on mice, by intracerebral inoculation of 1/0.03 cc.					
		Mor- bidity initial passage	Num- ber pas- sages	LD ₅₀	Neutralization by		
					Serum		
					WEE	EEE	St. Louis
<i>C. tarsalis</i> (1).....	12/2/49	11/29	4	10 ^{-7.0}	10,000	10	10
<i>C. tarsalis</i> (2).....	12/19/49	16/16	4	10 ^{-7.2}	10,000+	10	20
<i>A. dorsalis</i> (1).....	12/2/49	3/27	0	.....	.....	.....	.....
<i>A. vexans</i> (1).....	do.....	² 6/24	0	.....	.....	.....	.....
<i>A. vexans</i> (2).....	12/14/49	0/18	0	.....	.....	.....	.....
<i>A. dorsalis</i> (2).....	do.....	1/18	1	.....	.....	.....	.....
<i>A. nigromaculis</i>	do.....	2/20	1	.....	.....	.....	.....
Mites.....	4/29/50	3/20	0	.....	.....	.....	.....

¹ Catches were made in and on the periphery of this small town; several catches were made near residences of human cases. Date of collection was Aug. 12-14, 1949.

² Contaminated by bacteria; no passage made.

Discussion

At the onset it must be stated that the results presented in this paper contribute nothing that is new in regard to human infection and extra-human hosts in western equine encephalomyelitis. Howitt (10) previously has reported the detection of WEE virus in serum obtained from a patient in the acute phase of illness. Isolation of WEE virus from human blood has been a rare event, but it is not an unlikely one provided a sample is taken during a period just prior to onset of central nervous system illness. The detection of virus in feces of an acutely ill patient cannot be viewed as without likelihood of error. It is quite probable in view of the passages made, and particularly in the absence of homotypic humoral antibody, that isolation of WEE virus in a human stool sample was inadvertent and wholly unrelated to the patient's illness. Finally, the detection of WEE in *C. tarsalis* is an old story; however, most of the isolations have been made in California and only one previous isolation has been recorded in the Mid-western States (11).

One of the important public health aspects of the outbreak is the recognition that in this small geographic area two, and very probably three, neurotropic virus diseases invaded and caused manifest illness in persons during the summer months. Poliomyelitis and western equine encephalomyelitis viruses were actively present. The demonstrated absence of poliomyelitis and WEE viruses in the majority of the sick adults as indicated by tests made for virus and antibody make it appear more than probable that another neurotropic virus was active in causing the illnesses these persons experienced. Insofar as we have studied this material, we have not been able to define the etiologic agent(s).

Summary

A study has been made of an outbreak of encephalitis in Barnes County, North Dakota, during the summer of 1949. Evidence has been adduced to the effect that in a small geographic area three distinct types of central nervous system illnesses prevailed during a brief period of time. Poliomyelitis and western equine encephalitis occurred. Pertinent, however, is the fact that the majority of those ill did not have antibodies for the recognized neurotropic viruses present in this area, indicating the probable existence of a third neurotropic virus, not as yet detected and identified.

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Communities Awarded Milk Sanitation Ratings of 90 Percent or More, July 1949–June 1951

Fifty-four communities have been added to the Public Health Service "honor roll" of safe milk communities in the latest revision of the semiannual publication of the list. At the same time, 21 communities on the previous list have been dropped. This revision covers the period from July 1, 1949, to June 30, 1951, and includes a total of 211 cities and counties.

To achieve a place on the "honor roll," a community must be reported to the Public Health Service, by the State milk sanitation authorities concerned, as having complied substantially during that 2-year period with the various items of sanitation required by the Public Health Service Milk Ordinance. The items include such matters as the health of cows, sanitary methods of handling milk, proper cooling, and adequate pasteurization. The rating of 90 percent or more, which is necessary for inclusion on the list, is computed from the weighted average of the percentages of compliance. Separate lists are compiled for communities in which all market milk is pasteurized and for those in which both raw and pasteurized milk is sold.

The Public Health Service Milk Ordinance, which forms the basis for the milk ratings, is now in effect through voluntary adoption in 369 counties and 1,492 municipalities in 39 States. Thirteen States have placed it in effect on a State-wide basis; it has been adopted as regulation by 34 States and Territories. The ordinance, the rating procedure, and the compilation of this list are the work of the Milk and Food Branch, Division of Sanitation.

Although the ratings do not represent a complete measure of safety, they do indicate how closely a community's milk supply conforms to the standards for grade A milk as stated in the Public Health Service Milk Ordinance. High grade pasteurized milk is safer than high grade raw milk because of the added protection of pasteurization. The list, therefore, shows the percentage of the community's milk which is pasteurized. The Surgeon General has frequently urged consumers who are dependent on raw milk to pasteurize it at home, and has issued instructions on methods of home pasteurization.

Although semiannual publication of the list is intended to encourage communities operating under the Public Health Service Ordinance to attain and maintain a high level of enforcement of its provisions, no comparison is intended with communities operating under other milk ordinances. Some communities might be deserving of inclusion, but

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ALL MARKET MILK PASTEURIZED

Community	Percent of milk pasteurized	Date of rating	Community	Percent of milk pasteurized	Date of rating
ALABAMA			IOWA		
Auburn.....	100	Sept. 29, 1949	Clinton.....	100	July 12, 1950
Birmingham and Jefferson County*	100	Nov. 17, 1949	KANSAS		
Montgomery.....	100	May 11, 1950	Dodge City.....	100	Apr. 11, 1951
Opelika.....	100	June 15, 1950	Erie.....	100	May 1, 1951
ARKANSAS			Hillsboro.....	100	Feb. 8, 1951
Fort Smith.....	100	Dec. 15, 1950	Kansas City.....	100	Dec. 11, 1950
COLORADO			Pittsburgh.....	100	Jan. 26, 1951
Colorado Springs.....	100	Nov. —, 1949	KENTUCKY		
Cortez.....	100	July —, 1950	Bowling Green and Warren County.....	100	July 13, 1950
Durango.....	100	July —, 1950	Hopkinsville.....	100	Mar. —, 1950
Grand Junction.....	100	Mar. 29, 1950	Mayfield and Graves County.....	100	May 11, 1950
FLORIDA			Mount Sterling.....	100	Aug. 16, 1950
St. Petersburg.....	100	Jan. 12, 1950	Murray.....	100	Apr. 19, 1950
GEORGIA			Owensboro.....	100	Nov. 17, 1950
Cairo.....	100	May 31, 1951	Paducah.....	100	May 5, 1950
Calhoun.....	100	Feb. 15, 1951	Paris.....	100	May 17, 1951
Columbus.....	100	Mar. 30, 1951	MISSISSIPPI		
Cordele.....	100	Sept. 8, 1949	Corinth.....	100	June 6, 1951
LaGrange.....	100	June 25, 1951	Tupelo.....	100	Apr. 20, 1951
Quitman.....	100	May 30, 1951	MISSOURI		
West Point.....	100	June 22, 1951	Cape Girardeau.....	100	Oct. 25, 1950
IDAHO			Chillicothe.....	100	Oct. 8, 1950
Idaho Falls.....	100	Aug. 24, 1949	Columbia.....	100	Dec. 13, 1950
ILLINOIS			Concordia.....	100	June 7, 1950
Chicago.....	100	Oct. 28, 1949	Eldon.....	100	Dec. 14, 1950
Decatur.....	100	Apr. 27, 1950	Jackson.....	100	Oct. 25, 1950
East Moline.....	100	May 18, 1950	St. Joseph.....	100	June 14, 1951
Elgin.....	100	Dec. 8, 1949	NORTH CAROLINA		
Joliet.....	100	July 14, 1950	Charlotte.....	100	Feb. 23, 1950
Moline.....	100	May 18, 1950	Cumberland County.....	100	Feb. 10, 1950
North Shore Communities.....	100	Nov. 7, 1949	Durham County.....	100	June 8, 1950
Glencoe.....			Forsyth County.....	100	Nov. 22, 1950
Highland Park.....			High Point.....	100	Feb. 16, 1951
Kenilworth.....			Mars Hill.....	100	Dec. 9, 1949
Lake Bluff.....			New Hanover County.....	100	June 16, 1950
Lake Forest.....			Randolph County.....	100	Mar. 9, 1951
Northfield.....			Transylvania County.....	100	Jan. 16, 1950
Skokie.....			Wilson.....	100	Aug. 2, 1950
Winnetka.....			OKLAHOMA		
Oak Park.....	100	Sept. —, 1949	Ardmore.....	100	July 28, 1950
Peoria.....	100	Apr. 15, 1950	Cushing.....	100	Feb. 10, 1950
Rock Island.....	100	May 10, 1950	Duncan.....	100	Oct. 4, 1950
Silvis.....	100	May 18, 1950	Guthrie.....	100	May 26, 1950
Waukegan.....	100	Nov. 2, 1949	Sulphur.....	100	Aug. 29, 1950
INDIANA			SOUTH DAKOTA		
Anderson.....	100	Dec. 19, 1949	Sioux Falls.....	100	Sept. 21, 1950
Bedford-Orleans.....	100	Sept. —, 1950	TENNESSEE		
Bluffton.....	100	Dec. 14, 1950	Athens.....	100	June 14, 1950
Calumet Region.....	100	June —, 1950	Bristol.....	100	Nov. 4, 1949
East Chicago.....			Chattanooga.....	100	Oct. 26, 1949
Gary.....			Columbia.....	100	Apr. 20, 1950
Hammond.....			Covington.....	100	Aug. 15, 1950
Whiting.....			Dyersburg.....	100	Aug. 17, 1950
Evansville.....	100	Aug. —, 1950	Franklin.....	100	May 5, 1950
LaPorte.....	100	May —, 1950			
Marion and Gas City.....	100	Apr. —, 1951			
Shelbyville.....	100	Oct. —, 1950			
South Bend.....	100	Dec. —, 1949			
Vincennes.....	100	May —, 1951			

*Not operating under milk ordinance recommended by the Public Health Service.

**Communities Awarded Milk Sanitation Ratings of 90 Percent or More,
July 1949-June 1951—Continued**

ALL MARKET MILK PASTEURIZED—Continued

Community	Percent of milk pasteurized	Date of rating	Community	Percent of milk pasteurized	Date of rating
TENNESSEE—continued			TEXAS—continued		
Gallatin.....	100	May 11, 1951	San Antonio.....	100	Mar. 11, 1950
Greenville.....	100	Oct. 7, 1949	San Juan.....	100	Apr. 5, 1950
Kingsport.....	100	Sept. 23, 1949	Sweetwater.....	100	Apr. 19, 1950
Knoxville.....	100	Sept. 23, 1949	Texarkana.....	100	Aug. 5, 1950
Lawrenceburg.....	100	Aug. 21, 1950	Texas City.....	100	Jan. 16, 1951
Lebanon.....	100	July 19, 1950	Tyler.....	100	Mar. 2, 1950
Lewisburg.....	100	Apr. 17, 1950	Weslaco.....	100	Apr. 5, 1950
Manchester.....	100	Oct. 5, 1950	Wichita Falls.....	100	Jan. 31, 1951
Morristown.....	100	Oct. 13, 1949			
Nashville and Davidson County.....	100	Apr. 10, 1950	UTAH		
Newbern.....	100	Aug. 16, 1950	Delta.....	100	Nov. 17, 1950
Paris.....	100	Apr. 18, 1951	Minersville.....	100	Jan. 25, 1951
Pulaski.....	100	May 24, 1951			
Springfield.....	100	May 8, 1951	VIRGINIA		
Sweetwater.....	100	Oct. 19, 1950	Boydton.....	100	Apr. 4, 1950
			Bristol.....	100	Nov. 4, 1949
TEXAS			Buena Vista.....	100	May 8, 1951
Bay City.....	100	May 4, 1950	Lawrenceville.....	100	Apr. 6, 1950
College Station.....	100	Sept. 20, 1950	Lexington.....	100	May 8, 1951
Corpus Christi.....	100	Oct. 14, 1950	Pulaski.....	100	June —, 1950
Falfurrias.....	100	Jan. 12, 1951	Radford.....	100	June —, 1950
Gladewater.....	100	Jan. 19, 1951	Richmond.....	100	May —, 1950
Harlingen.....	100	Mar. 20, 1950	Roanoke.....	100	Sept. 23, 1950
Houston.....	100	June 30, 1950	Staunton.....	100	Nov. 3, 1950
Jacksonville.....	100	Apr. 12, 1950	Suffolk.....	100	May 24, 1950
Kilgore.....	100	Jan. 19, 1951			
Mission.....	100	Apr. 5, 1950	WASHINGTON		
Pharr.....	100	Apr. 5, 1950	Spokane.....	100	July 21, 1950
			Whitman County.....	100	Aug. 16, 1950

BOTH RAW AND PASTEURIZED MARKET MILK

ALABAMA			NORTH CAROLINA		
Lanett.....	97.5	Nov. 9, 1950	Alexander County.....	73.5	Mar. 31, 1950
			Avery County.....	73.5	July 12, 1949
GEORGIA			Cabarrus County.....	73.4	Jan. 20, 1950
Camilla.....	78	May 30, 1951	Greensboro.....	99.7	July 27, 1950
Cartersville.....	94.2	Feb. 15, 1951	Henderson County.....	86	Feb. 6, 1950
Dalton-Whitfield County.....	83.3	Apr. 4, 1951	Iredell County.....	95.7	Oct. 27, 1950
Macon.....	98.6	June 15, 1951	Macon County.....	91.4	Aug. 10, 1950
Thomaston.....	79.7	May 24, 1950	Montgomery County.....	93.1	Mar. 22, 1951
Thomasville.....	99.4	May 29, 1951	Orange County.....	96.1	May 11, 1950
			Wilkes County.....	89.7	Jan. 25, 1950
			OKLAHOMA		
INDIANA			Elk City.....	95.5	July 12, 1950
Michigan City.....	98	May —, 1950	Holdenville.....	89	Mar. 28, 1950
			Lawton.....	96.2	Feb. 20, 1950
IOWA			Mangum.....	93.8	June 29, 1950
Davenport.....	99	Jan. 27, 1950	Norman.....	94.1	Sept. 22, 1950
			Ponca City.....	93.1	Sept. 15, 1950
KANSAS			Stillwater.....	96	July 7, 1949
Neodesha.....	85	Mar. 14, 1951	Sulphur.....	98	Sept. 6, 1949
			TENNESSEE		
KENTUCKY			Cleveland.....	94.4	Sept. 7, 1950
Lexington and Fayette Counties.....	96	June 23, 1950	Elizabethton.....	94	Aug. 8, 1950
			Jackson.....	95.8	Mar. 30, 1950
LOUISIANA			Johnson City.....	96.6	Aug. 9, 1950
Iberia Parish.....	96	May 3, 1951	Maryville-Alcoa.....	99.2	Oct. 17, 1950
			McMinnville.....	95.1	May 25, 1950
			Murfreesboro.....	98	July 27, 1949
			TEXAS		
MISSOURI			Beaumont.....	99.4	Oct. 20, 1950
Boonville.....	87	Oct. 12, 1950	Brenham.....	92	Apr. 15, 1950
Jefferson City.....	88.5	July 20, 1950	Brownsville.....	84.8	Mar. 20, 1950
Moberly.....	92.5	Oct. 13, 1949	Bryan.....	98.8	Sept. 21, 1950
Sedalia.....	92.5	Aug. 17, 1950			
Springfield.....	99	Nov. 10, 1950			

**Communities Awarded Milk Sanitation Ratings of 90 Percent or More,
July 1949-June 1951—Continued**

BOTH RAW AND PASTEURIZED MARKET MILK—Continued

Community	Percent of milk pasteurized	Date of rating	Community	Percent of milk pasteurized	Date of rating
TEXAS—continued			VIRGINIA		
Cleburne.....	91.5	Nov. 17, 1950	Emporia.....	34	Apr. 7, 1950
Corsicana.....	99.6	Jan. 31, 1950	Lynchburg.....	98.2	June 22, 1951
Edinburg.....	85.9	Apr. 5, 1950			
Fort Worth.....	99.95	Feb. 4, 1950			
Laredo.....	62	Aug. 24, 1950			
Longview.....	99.4	Jan. 19, 1951			
Lubbock.....	99.2	Nov. 8, 1950			
McAllen.....	98.4	Apr. 5, 1950			
Paris.....	92.4	Nov. 16, 1950			

NOTE.—In these communities the pasteurized market milk shows a 90-percent or more compliance with the grade A pasteurized milk requirements and the raw market milk shows a 90-percent or more compliance with the grade A raw milk requirements of the Public Health Service Milk Ordinance and Code.

Note particularly the percentage of milk pasteurized in the various communities listed. This percentage is an important factor to consider in estimating the safety of a city's milk supply. All milk should be pasteurized or boiled, either commercially or at home, before it is consumed.

they cannot be listed because no arrangements have been made for determination of their ratings by the State milk sanitation authority concerned. In other cases, the ratings which were submitted have lapsed because they were over 2 years old. Still other communities, some of which may have high grade milk supplies, have indicated no desire for rating or inclusion.

The rules for inclusion of a community on the "honor roll" are:

1. All ratings must be determined by the State milk sanitation authority in accordance with the Public Health Service rating method,¹ which is based upon the grade A pasteurized milk and the grade A raw milk requirements of the Public Health Service Milk Ordinance. (A recent departure from the method described consists of computing the pasteurized milk rating by weighting the pasteurization plant rating twice that of the raw milk intended for pasteurization.)
2. No community will be included in the list unless both its pasteurized milk and its raw milk ratings are 90 percent or more. Communities in which only raw milk is sold will be included if the raw milk rating is 90 percent or more.
3. The rating used will be the latest submitted to the Public Health Service, but no rating will be used which is more than 2 years old. (In order to promote continuous rigid enforcement rather than occasional "clean-up campaigns," it is suggested that when the rating of a community on the list falls below 90 percent no resurvey be made for at least 6 months. This will result in the removal of the community from the subsequent semiannual list.)
4. No community will be included on the list whose milk supply is not under an established program of official routine inspection and laboratory control provided by itself, the county, a milk control district, or the State. (In the absence of such an official program there can be no assurance that only milk from sources rating 90 percent or more will be used continuously.)
5. The Public Health Service will make occasional check surveys of cities for which ratings of 90 percent or more have been reported by the State. (If the check rating is less than 90 percent, but not less than 85, the city will be removed

¹Pub. Health Rep. 53:1386 (1938). Reprint No. 1970.

from the 90-percent list after 6 months unless a resurvey submitted by the State during this probationary interim shows a rating of 90 percent or more. If the check rating is less than 85 percent, the city will be removed from the list immediately. If the check rating is 90 percent or more, the city will be retained on the list for 2 years from the date of the check survey, unless a subsequent rating during this period warrants its removal.)

State milk sanitation authorities who are not now equipped to determine municipal ratings are urged, in fairness to their communities, to equip themselves as soon as possible. The personnel required is small; in most States one milk sanitarian is sufficient for this work.

Public Health Service Publications

July-December 1950

This list is issued to provide a complete and continuing record of Public Health Service publications for reference use by librarians, scientists, researchers, and others interested in public health work, and not to offer the publications for indiscriminate free distribution.

Single sample copies of most of the publications listed are available from the Public Inquiries Branch, Division of Public Health Methods, Public Health Service, Washington 25, D. C.

For quantities of any of these publications, except the statistical reports of the National Office of Vital Statistics, order from the Government Printing Office, where they are available at the prices shown, with a 25 percent reduction on orders of 100 or more copies of any single publication. The statistical reports of the National Office of Vital Statistics can be obtained only by writing to the National Office of Vital Statistics, Public Health Service, Washington 25, D. C.

PERIODICALS

- *Public Health Reports (weekly), July-December, vol. 65, Nos. 27-52. 851-1764 pages. 10 cents a copy. Subscription price \$4.75 a year.
- *Extracts from Public Health Reports (monthly), July-December, Tuberculosis Control Issues Nos. 53-58. Average 30 pages each. 10 cents a copy. Subscription price \$1 a year.
- *The Journal of Venereal Disease Information (monthly), July-December, vol. 31, Nos. 7-12. 173-347 pages. 15 cents a copy. Subscription price \$1.25 a year.
- *Journal of the National Cancer Institute (bimonthly), August to December, vol. 11, Nos. 1-3. 1-662 pages. \$1.50 a copy. Subscription price \$8 a year.
- Public Health Engineering Abstracts (monthly), July-December, vol. XXX, Nos. 7-12. Usually 32 pages each. No sales stock.
- *Industrial Hygiene Newsletter (monthly), July-December, vol. 10, Nos. 7-12. Usually 16 pages each. 10 cents a copy. Subscription price \$1 a year.
- CDC Bulletin (monthly), July-December, vol. IX, Nos. 7-12. No sales stock.

NONPERIODIC PUBLICATIONS

Librarians, Please Note

Nearly all publications on this list carry the designation "Public Health Service Publication No. —." This does not represent a new series, but is a registration system adopted late in 1950 as an internal housekeeping measure. Under the numbering plan, all nonperiodic

*Subscriptions to this periodical can be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

issuances carry this designation, which is assigned consecutively at the time of going to press. Publications issued prior to adoption of the numbering plan do not carry this designation and will not be incorporated into the system unless they are reissued.

The following series have been discontinued:

Supplements to Public Health Reports—last issued: No. 213 (1950).

Supplements to Journal of Venereal Disease Information—last issued: No. 23 (1949).

National Institutes of Health Bulletins—last issued: No. 193 (in press).

Public Health Bulletins—last issued: No. 306 (1949). (A bulletin on rural health cooperatives, jointly prepared by the Farm Credit Administration and the Public Health Service which was published by the Farm Credit Administration, was erroneously identified as Public Health Bulletin No. 308.)

Venereal Disease Bulletins—last issued: No. 100 (1949).

Series to Continue. Publications with a subject and field homogeneity will continue to be issued in series. In addition to the registration number given them under the over-all numbering system, they will carry the conventional series notation long familiar to librarians. Publications issued as part of a series are shown first on this list.

Missing Numbers. Under the new numbering system, publications are assigned registration numbers at the time they go to the printer. Variations in printing schedules result in publications being released out of the consecutive order of the Public Health Service Publications number, and some will be temporarily missing. One publication (No. 36), prepared for in-service use and not for general distribution, was inadvertently numbered. No. 36, therefore, will be permanently missing from library files.

PUBLIC HEALTH BIBLIOGRAPHY SERIES*

2. Catalog of mental health pamphlets and reprints available for distribution, 1950. 1950. 55 pages. 20 cents. (PHS Publication No. 19.)

CANCER MORBIDITY SERIES*

1. Cancer illness among residents in Atlanta, Ga., 1947. By Sidney J. Cutler, 1950. 43 pages. No sales stock. (PHS Publication No. 13.)

CANCER PAMPHLET SERIES

6. Cancer of the genito-urinary tract. 1950. 20 pages. 10 cents; \$5 per 100.
7. Cancer of the skin. 1950. 19 pages. 10 cents; \$5 per 100.

HEALTH INFORMATION PAMPHLET SERIES

9. Arthritis and rheumatism. July 1950. 6-page folder. 5 cents; \$1.75 per 100. (PHS Publication No. 29.)
33. Tuberculosis. June 1950. 12 pages. 5 cents; \$3.75 per 100. (PHS Publication No. 30.)

* New series.

MENTAL HEALTH SERIES

2. Training and research opportunities under the National Mental Health Act. Revised June 1950. 11 pages. 14 pages mimeographed inserts. 10 cents. (PHS Publication No. 22.)
4. National Institute of Mental Health. Revised 1950. 21 pages. 10 cents. (PHS Publication No. 20.)
5. Careers in mental health. 1950. 19 pages. 15 cents. (PHS Publication No. 23.)
- 5A. Careers in mental health . . . as a psychiatrist. 1950. 13 pages. 10 cents. (PHS Publication No. 25.)
- 5B. Careers in mental health . . . as a psychiatric nurse. 1950. 13 pages. 10 cents. (PHS Publication No. 26.)
- 5C. Careers in mental health . . . as a clinical psychologist. 1950. 13 pages. 10 cents. (PHS Publication No. 27.)
- 5D. Careers in mental health . . . as a psychiatric social worker. 1950. 12 pages. 10 cents. (PHS Publication No. 28.)

PUBLIC HEALTH MONOGRAPH SERIES*

1. A methodology for environmental and occupational cancer surveys. By W. C. Hueper. 1950. 37 pages. 15 cents. (PHS Publication No. 12.)
2. Tuberculosis in Iceland. Epidemiological studies. By Sigurdur Sigurdsson. 1950. 86 pages. 45 cents. (PHS Publication No. 21.)

OTHER PUBLICATIONS

- Cancer diagnostic tests. Principles and criteria for development and evaluation. By John E. Dunn, Jr., and Samuel W. Greenhouse. 1950. 23 pages. 20 cents. (PHS Publication No. 9.)
- Cancer services and facilities in the United States, 1950. 1950. 152 pages. 35 cents. (PHS Publication No. 14.)
- Clean water is everybody's business. 1950. 26 pages, illustrated. 20 cents. (PHS Publication No. 11.)
- Conservation of hearing. 1950. 8 pages, illustrated. No sales stock. (PHS Publication No. 1.)
- Conservation of vision. 1950. 8 pages, illustrated. No sales stock. (PHS Publication No. 3.)
- The dietitian in the hospitals of the U. S. Public Health Service. 1950. 24 pages, illustrated. 15 cents. (PHS Publication No. 35.)
- Handbook for photofluorographic operators. 1950. 69 pages, illustrated. 45 cents. (PHS Publication No. 18.)
- Health of ferrous foundrymen in Illinois. 1950. 130 pages, illustrated. 75 cents. (PHS Publication No. 31.)
- Heart disease, a story of progress. 1950. 20 pages. 15 cents. (PHS Publication No. 17.)
- Home care. 1950. 8 pages, illustrated. No sales stock. (PHS Publication No. 4.)
- Index of hospitals with tuberculosis beds in the United States and Territories as of January 1, 1950. 1950. 21 pages. No sales stock. (PHS Publication No. 32.)
- Individual water supply systems. Recommendations of the Joint Committee on Rural Sanitation. Revised 1950. 61 pages. 20 cents. (PHS Publication No. 24.) (Formerly Supplement 185, Public Health Reports.)
- Industrial health and medical programs. By Margaret C. Klem, Margaret F. McKiever, and Walter J. Lear. September 1950. 397 pages. \$1. (PHS Publication No. 15.)

- Long term illness. 1950. 8 pages, illustrated. Out of print. (PHS Publication No. 2.)
- Manual for medical examination of aliens. 1950. 136 pages. (For official use only.)
- Manual of recommended practice for sanitary control of the shellfish industry. 1946 recommendations of the Public Health Service. 1950. 44 pages. 20 cents. (PHS Publication No. 33.) (Formerly Public Health Bulletin No. 295.)
- Medical rehabilitation. 1950. 8 pages, illustrated. Out of print. (PHS Publication No. 5.)
- Multiple screening. 1950. 8 pages, illustrated. No sales stock. (PHS Publication No. 7.)
- Obesity. 1950. 8 pages, illustrated. No sales stock. (PHS Publication No. 6.)
- The public health nurse in your community. 1950. 14 pages, illustrated. 10 cents. (PHS Publication No. 47.)
- Suggested State Water Pollution Control Act and explanatory statement. October 1950. 23 pages. No sales stock. (PHS Publication No. 49.)
- There's no place like home—for accidents. 1950. 8 pages, illustrated. No sales stock. (PHS Publication No. 34.)
- The United States cadet nurse corps, 1943-48. 1950. 100 pages; 17 photographs. \$1. (PHS Publication No. 38.)
- You'll want to know about your hospital program. 1950. 2-page folder. 5 cents; \$1.50 per 100. (PHS Publication No. 8.)
- Your best buy. 1950. 5 pages, illustrated. 5 cents.

REPRINTS FROM PUBLIC HEALTH REPORTS

3031. Child health services in 12 metropolitan districts. By Maryland Y. Pennell, Katherine Bain, and John P. Hubbard. July 21, 1950. 16 pages. 10 cents.
3032. Effect of formaldehyde on the direct microscopic count of raw milk. By B. S. Levine. July 28, 1950. 8 pages. 10 cents.
3033. Field tests of molluscicides against *Australorbis glabratus* in endemic areas of schistosomiasis in Puerto Rico. By E. G. Berry, M. O. Nolan, and J. Oliver Gonzalez. July 28, 1950. 12 pages. 5 cents.
3034. The visual identification of V and W form colonies in *Salmonella* cultures. By Maurice Landy. July 28, 1950. 2 pages. 5 cents.
3035. The physiological response to dust from mine locomotive traction material. By Lawrence T. Fairhall, Benjamin Highman, and Vernon B. Perone. August 11, 1950. 18 pages; 15 illustrations. 10 cents.
3036. 1080 (sodium fluoroacetate) poisoning of rats on ships. By John H. Hughes. August 11, 1950. 8 pages; 2 illustrations. 5 cents.
3037. Bactericidal efficiency of quaternary ammonium compounds. By C. T. Butterfield, Elsie Wattie, and C. W. Chambers. August 18, 1949. 18 pages. 10 cents.
3028. Haplomycosis in Montana rabbits, rodents, and carnivores. By William L. Jellison. August 18, 1950. 8 pages; 1 illustration. 5 cents.
3039. The role of morbidity reporting and case registers in cancer control. By Sidney J. Cutler. August 25, 1950. 6 pages. 5 cents.
3040. Public Health Service publications July-December 1949. August 25, 1950. 12 pages. No sales stock.
3041. Relapse following apparent arrest of leprosy by sulfone therapy. By Paul T. Erickson. September 8, 1950. 12 pages. 5 cents.
3042. Availability of fluorine in sodium fluoride against sodium fluosilicate. By F. J. McClure. September 15, 1950. 12 pages. 5 cents.

3043. Why cancer "control"? By Raymond F. Kaiser. September 22, 1950. 6 pages. 5 cents.
3044. Trends in age distribution of diphtheria in the United States. By C. C. Dauer. September 22, 1950. 10 pages. 5 cents.
3045. Tularemia in man from a domestic rural water supply. By W. L. Jellison, Deane C. Epler, Edith Kuhns, and Glen M. Kohls. September 22, 1950. 8 pages. 5 cents.
3046. Specific causes of illness found in monthly canvasses of families. Sample of the Eastern Health District of Baltimore, 1938-43. By Selwyn D. Collins, F. Ruth Phillips, and Dorothy S. Oliver. September 29, 1950. 30 pages. 10 cents.
3047. Tularemia. Geographical distribution of "deerfly fever" and the biting fly, *Chrysops discalis* Williston. By William L. Jellison. October 13, 1950. 9 pages. 5 cents.
3048. Detection of diabetes in a nutrition survey. A study of 550 persons in Ottawa County, Mich. By Elbert C. Tabor and Keith H. Frankhouser. October 13, 1950. 6 pages. 5 cents.
3049. A new coli O-antigen group. By W. H. Ewing and F. Kauffmann. October 13, 1950. 4 pages. 5 cents.
3050. Multiple screening and specialized programs. By Joseph W. Mountin. October 20, 1950. 10 pages. 5 cents.
3051. Rural health cooperatives. By Helen L. Johnston. October 27, 1950. 16 pages. 5 cents.
3052. The cancer program in medical schools. A review. By Raymond F. Kaiser. October 27, 1950. 6 pages. 5 cents.
3053. Studies on mass control of dental caries through fluoridation of the public water supply. By H. Trendley Dean, Francis A. Arnold, Jr., Philip Jay, and John W. Knutson. October 27, 1950. 6 pages. 5 cents.
3054. Hospital beds in the United States, 1950. By John W. Cronin, Louis S. Reed, and Anna Mae Baney. November 10, 1950. 13 pages. 5 cents.
3055. The Alkaescens-Dispar group. By W. H. Ewing, M. W. Taylor, and M. C. Hucks. November 10, 1950. 8 pages. 5 cents.
3056. Laboratory tests on the rapidity of molluscicidal action of copper sulfate in high concentration. By M. O. Nolan. November 10, 1950. 5 pages. 5 cents.
3057. Health resources in defense of the Nation. November 17, 1950. 36 pages. 15 cents.
3058. Control of Norway rats with residual rodenticide warfarin. By Wayland J. Hayes, Jr., and Thomas B. Gaines. November 24, 1950. 20 pages. 10 cents.
3059. Industrial sickness absenteeism. Males and females, 1949, and males, first and second quarters, 1950. By W. M. Gafafer. November 24, 1950. 6 pages. 5 cents.
3060. Public health: 1950. A topical and selective report of the Seventy-eighth Annual Meeting of the American Public Health Association and Related Organizations, St. Louis, Mo., October 30-November 3, 1950. December 8 and 15, 1950. 84 pages. 30 cents.
3061. Public Health Service publications, January-June 1950. December 22, 1950. 8 pages. No sales stock.
3062. Causes of absenteeism in New Haven schools. By Joseph I. Linde, Abraham Gelperin, and Morris A. Granoff. December 29, 1950. 8 pages. 5 cents.

SUPPLEMENT TO PUBLIC HEALTH REPORTS

194. Directory of full-time local health officers, 1950. 1950 revision. 49 pages, 20 cents.

INDEX TO PUBLIC HEALTH REPORTS

- Index to Public Health Reports, vol. 64, pt. I, January-June 1949. 40 pages, 10 cents.

REPRINTS FROM JOURNAL OF THE NATIONAL CANCER INSTITUTE*

215. The growth of normal plant tissue *in vitro* as affected by chemical carcinogens and plant growth substances. II. The cytology of the carrot-root tissue. By Michael Levine. April 1950. 37 pages; 11 illustrations.
216. Histopathology of estrogen-induced tumors in guinea pigs. By Eli M. Nadel. April 1950. 23 pages; 7 illustrations.
217. Production of malignancy *in vitro*. X. Continued description of cells at the glass interface of the cultures. By Wilton R. Earle, Edward L. Schilling, and Emma Shelton. April 1950. 37 pages; 11 illustrations.
218. Production of malignancy *in vitro*. XI. Further results from reinjection of *in vitro* cell strains into strain C₃H mice. By Wilton R. Earle, Emma Shelton, and Edward L. Schilling. April 1950. 9 pages.
219. A comparative study of the morphology and glucuronidase activity in 44 gastrointestinal neoplasms. By William H. Fishman and Robert Bigelow. April 1950. 8 pages.
220. Inhibition of sea-urchin egg cleavage by a series of substituted carbamates. By Ivor Cornman. April 1950. 16 pages.
221. Factors in the development of spontaneous mammary gland tumors in agent-free strain C₃Hb mice. By W. E. Heston, Margaret K. Deringer, Thelma B. Dunn, and Wayne D. Levillain. April 1950. 17 pages; 2 illustrations.
222. Attempt to detect a mammary tumor-agent in strain C mice by X-radiation. By Howard B. Andervont and Thelma B. Dunn. April 1950. 33 pages; 4 illustrations.
223. Studies on fatty acid oxidation by normal and neoplastic liver. By Carl G. Baker and Alton Meister. April 1950. 8 pages.
224. Comparative studies of liver glucuronidase activity in inbred mice. By Andrew G. Morrow, Ezra M. Greenspan, and Dorothy M. Carroll. April 1950. 5 pages.
225. Studies of the carcinogenic action in the rat of 2-nitro-, 2-amino-, 2-acetyl-amino-, and 2-diacetylaminofluorene after ingestion and after painting. By Harold P. Morris, Celia S. Dubnik, and James M. Johnson. June 1950. 13 pages.
226. Studies of the effects *in vitro* of roentgen radiation on the biological activity of the agent of chicken tumor I (Rous sarcoma). By W. Ray Bryan, Egon Lorenz, and John B. Moloney. June 1950. 23 pages.
227. Formation of tyrosine crystals from leukocytes and various normal and pathological tissues by means of a synthetic detergent. By William W. Ayres. June 1950. 19 pages; 4 illustrations.
228. Note on the influence of the number of litters upon the incidence of mammary tumors in mice. By O. Muhlbock. June 1950. 4 pages.
229. Lactic dehydrogenase activity of certain tumors and normal tissues. By Alton Meister. June 1950. 9 pages.
230. Damage induced in sarcoma 37 with podophyllin, podophyllotoxin, alpha-peltatin, beta-peltatin, and quercetin. By J. Leiter, V. Downing, J. L. Hartwell, and M. J. Shear. June 1950. 21 pages; 2 illustrations.

*No sales stock is carried on any of the reprints from the Journal of the National Cancer Institute.

231. Effect of alpha-peltatin, beta-peltatin, and podophyllotoxin on lymphomas and other transplanted tumors. By Ezra M. Greenspan, J. Leiter, and M. J. Shear. June 1950. 39 pages; 9 illustrations.
232. The Histochemical Society. First business meeting and proceedings, University of Pennsylvania School of Medicine, Philadelphia, Pa., March 24 and 25, 1950. June 1950. 45 pages.

REPRINTS FROM THE JOURNAL OF VENEREAL DISEASE INFORMATION

399. A proposal for joint action against congenital syphilis. By Betty Huse and W. H. Aufranc. July 1950. 4 pages. 5 cents.
400. Status of treatment of syphilitic pregnant women and of children who have congenital syphilis. By Mary S. Goodwin. July 1950. 8 pages. 5 cents.
401. How to evaluate positive Kahn tests in infants. By Herman N. Bundesen and Hans C. S. Aron. July 1950. 6 pages. 5 cents.
402. The dentist's role in finding congenital syphilis. By Frank P. Bertram. July 1950. 4 pages. 5 cents.
403. Effectiveness of penicillin in preventing congenital syphilis when administered prior to pregnancy. By H. N. Cole, Frederick Plotke, Evan W. Thomas, and Kenneth H. Jenkins. August 1950. 4 pages. 5 cents.
404. The patient's attitude toward venereal disease education. By C. W. Buck and G. E. Hobbs. August 1950. 5 pages. 5 cents.
405. The identity of *Neisseria* other than the gonococcus isolated from the genitourinary tract. By Louis Wax. August 1950. 5 pages. 5 cents.
406. Measurement of trend of syphilis in Mississippi. By A. L. Gray, Lida J. Usilton, and Albert P. Iskrant. September 1950. 6 pages. 5 cents.
407. The Ohio National Guard blood-testing program. By Charles R. Freeble, Jr., Earl O. Wright, James F. Donohue, and John B. Bolin. September 1950. 4 pages. 5 cents.
408. Treatment of early syphilis with three injections of penicillin and with one injection of penicillin. II. By R. D. Wright, F. P. Nicholson, and R. C. Arnold. September 1950. 6 pages. 5 cents.
409. The value of divided cerebrospinal fluid specimens. By Richard A. Koch. October 1950. 4 pages. 5 cents.
410. The treatment of syphilis of the masses. By R. R. Willcox. October 1950. 8 pages. 5 cents.
411. Treatment of gonorrhea with chloramphenicol (chloromycetin). By Aston B. Greaves, Gordon R. MacDonald, Monroe J. Romansky, and S. Ross Taggart. October 1950. 2 pages. 5 cents.
412. Gonococci and the menstrual cycle. By Tauno Putkonen and Kaarle Ebeling. October 1950. 5 pages. 5 cents.
413. Results of penicillin treatment in congenital syphilis. By Leland J. Hanchett and Maude A. Perry. November 1950. 10 pages. 5 cents.
414. Special contact investigation of the patients of private physicians. By Benson H. Sklar and Leonard M. Schuman. November 1950. 4 pages. 5 cents.
415. The development and behavior patterns of immunity in experimental syphilis. By R. C. Arnold, R. D. Wright, and Charlotte P. McLeod. November 1950. 4 pages. 5 cents.
416. The treatment of neurosyphilis: Penicillin alone versus penicillin plus arsenic and bismuth. By Edgar B. Johnwick. December 1950. 5 pages. 5 cents.
417. Suggested technics for mass health education at county fairs. By Charles R. Freeble, Jr., Earl O. Wright, James F. Donohue, and Allen D. Pratt. December 1950. 8 pages. 5 cents.

418. The antigens of the cultured *Treponema pallidum* (Reiter's strain) and the antispirochetal antibodies in human syphilis. By G. D'Alessandro, F. G. Odo, and L. Dardanoni. December 1950. 2 pages. 5 cents.

NATIONAL OFFICE OF VITAL STATISTICS PUBLICATIONS*

Current Mortality Analysis (monthly), vol. 8, Nos. 4-9, 1950.

Monthly Marriage Report (marriage licenses issued in major cities), vol. 4, Nos. 5-10, 1950.

Monthly Vital Statistics Bulletin, vol. 13, Nos. 5-10, 1950.

Weekly Mortality Index, vol. 21, Nos. 26-51, 1950.

Weekly Morbidity Report, vol. 1, Nos. 25-50, 1950.

Communicable Disease Summary, weeks ending June 24, 1950-December 30, 1950.

Vital Statistics—Special Reports, Vol. 32, Cancer Mortality in the United States

2. Available cancer mortality data and some problems in their interpretation: United States. 15-40 pages.
3. Cancer mortality for selected sites, by age, sex, and race: United States, 1930-45. 41-154 pages.
4. Cancer mortality for selected years: United States and each State, 1900-1945. 155-180 pages.
5. Cancer deaths in institutions: United States, 1940 and 1945. 181-204 pages.
6. Cancer mortality by marital status: United States, 1940. 205-236 pages.
7. Effect of cancer on longevity: United States, 1939-41. 237-242 pages.
8. Cancer mortality by State and county: United States, 1945. 243-272 pages.
9. Cancer mortality by urban and rural areas: United States, 1945. 273-284 pages.

Vital Statistics—Special Reports, Vol. 33, Selected Studies

7. Investigation of separation factors, at ages 1-4, based on 10-percent mortality sample. 127-132 pages.
8. Births and birth rates in the entire United States, 1909-48. 133-162 pages.

Vital Statistics—Special Reports, Vol. 34, State Summaries

- 30-54. New Mexico-Wyoming, United States, Hawaii, Puerto Rico, Virgin Islands, Alaska. 523-993 pages.

Vital Statistics—Special Reports, Vol. 35, National Summaries

12. Divorce and annulment statistics: specified States, 1948. 161-186 pages.
13. Infant mortality from selected causes by age, race, and sex: United States, 1948. 187-220 pages.
14. Accident fatalities in the United States, 1948. 221-240 pages.
15. Motor-vehicle accidents fatalities, United States, 1948. 241-292 pages.
16. Stillbirth statistics, United States, each division and State, and 92 major cities, 1948. 293-302 pages.
17. Infant mortality by race and by urban and rural areas: United States, each division and State, 1948. 303-312 pages.
18. Deaths and death rates for selected causes by age, race, and sex: United States, 1948. 313-346 pages.
19. Maternal mortality by cause, race, and urban and rural areas: United States, each division and State, 1948. 347-360 pages.

*Available only from the National Office of Vital Statistics, Public Health Service, Washington 25, D. C.

Incidence of Disease

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

Reports From States for Week Ended August 4, 1951

Poliomyelitis

A total of 1,203 cases of poliomyelitis was reported in the United States for the current week as compared with 990 for the previous week. For the same weeks in 1949 and 1950, 2,446 and 1,185 cases, respectively, were reported. The cumulative total for the calendar year is now 6,843 as compared with 10,719 in 1949, and 7,298 in 1950. The cumulative total since the seasonal low week late in March is 5,631 as compared with 9,806 and 6,167, respectively, in 1949 and 1950.

With few exceptions States in all geographical regions reported more cases for the current week as compared with the previous week, but there was no marked increase in California, Texas, Colorado, and Louisiana, where substantial numbers of cases have been reported in the past month. The increase in most of the remaining States appears to represent an expected seasonal rise.

In Texas, poliomyelitis has been concentrated in seven counties. Of the 546 cases reported in the entire State, from May 1 to July 28, 25 were in Bexar, 41 in Dallas, 83 in Harris, 96 in Nueces, 26 in San Patricio, 46 in Tarrant, and 16 in Wichita Counties. In five of the seven counties the peak number of cases was reached before July 15.

In Mississippi, the disease has been concentrated in a group of four counties in the west central part of the State. During the 4-week period ended July 28, 102 cases were reported in Mississippi of which number 28 were in Sunflower, 9 in Washington, 5 in Bolivar, and 4 in Leflore Counties. The largest number reported in any one week in Sunflower County was 14 for the week ended July 21. In 1950, totals of 24, 22, 10, and 10 cases, respectively, were reported in the above group of counties.

In Louisiana, poliomyelitis incidence appears to have passed its peak. In Caddo Parish, where 72 cases were reported in 9 weeks ended July 28, the largest number was reported for the week ended July 21. In Red River Parish, 10 cases were reported for the week ended July 7, and only 1 in the following 3 weeks.

In certain other States such as California, Utah, Colorado, Wisconsin, Illinois, Kansas, and Michigan, a large proportion of cases in recent weeks have been reported from urban areas. In Michigan, nearly three-fourths of the cases reported have been in Detroit and other parts of Wayne County. In Arkansas, about one-half of the 99 cases reported in the first 7 months of 1951 have occurred in Pulaski and Jefferson Counties. There have been 55 paralytic cases, 26 nonparalytic, and 18 unspecified.

Human Rabies

One case of human rabies was reported in Georgia for the current week.

Epidemiological Reports

Tularemia

Dr. M. E. Rindge, Connecticut Department of Health, has reported a case of tularemia in a 17-year-old boy who was scratched by a cat on June 23 while visiting in North Carolina. He became ill on June 27. He was admitted to a hospital in Connecticut on July 13 with typical ulcers at the site of the scratches and large axillary nodes. Agglutination reactions were strongly positive. Recovery was rapid following treatment with terramycin.

Gastroenteritis

Dr. S. V. Dugan, Kentucky Department of Health, has reported two outbreaks of gastroenteritis. Five of eight persons who ate a frosted, filled cake in a restaurant in Mercer County became ill 3½ hours later. A family outbreak consisting of four cases occurred in Allen County. A homemade chocolate pie or raw buttermilk was suspected as being the vehicle. The source of the milk was an unsanitary three-cow dairy where raw milk and buttermilk were sold.

Infectious Hepatitis

Dr. C. C. Kuehn, Louisiana Department of Health, has reported a localized outbreak of infectious hepatitis in Baton Rouge. The parish health officer, Dr. J. D. Martin, states that six of the seven cases reported were between the ages of 4 and 9. All were white persons. The first cases were reported early in June, and the last in the middle of July.

Water-Borne Gastroenteritis

Dr. F. S. Leeder, Michigan Department of Health, has reported an outbreak of gastroenteritis in Macomb County in which the public water supply presumably was the source of infection. The outbreak, which was explosive in character, began on July 23 and affected approximately 3,500 persons in a community having a population of 7,643. One or more persons in nearly every household were affected.

Epidemiological investigation by Dr. Stryker, county health officer, indicated that the only vehicle that could be considered common to all was the water supply which came from wells. A severe rainstorm occurred on July 21. At the time of the outbreak, the water supply was unchlorinated. Water samples collected on July 25 revealed no growth when examined bacteriologically.

Comparative Data For Cases of Specified Reportable Diseases: United States

[Numbers after diseases are International List numbers, 1948 revision]

Disease	Total for week ended—		5-year median 1946-50	Seasonal low week	Cumulative total since seasonal low week		5-year median 1945-46 through 1949-50	Cumulative total for calendar year—		5-year median 1946-50
	Aug. 4, 1951	Aug. 5, 1950			1950-51	1949-50		1951	1950	
Anthrax (062).....	2	2	1	(1)	(1)	(1)	44	29	32	
Diphtheria (055).....	56	63	126	27th	175	239	2,183	3,367	5,043	
Encephalitis, acute infectious (082).....	42	20	19	(1)	(1)	(1)	582	472	333	
Influenza (480-483).....	250	439	300	30th	250	439	300	116,305	139,203	128,857
Measles (085).....	2,708	1,906	1,906	35th	490,846	303,490	580,926	462,145	284,360	545,980
Meningitis, meningococcal (057.0).....	79	43	57	37th	3,739	3,456	3,355	2,778	2,543	2,383
Pneumonia (490-493).....	615	873	(2)	(1)	(1)	(1)	45,154	59,342	(2)	
Polio myelitis, acute (080).....	1,203	1,185	1,237	11th	³ 5,631	6,167	³ 6,167	7,298	7,030	
Rocky Mountain spotted fever (104).....	21	22	38	(1)	(1)	(1)	219	299	353	
Scarlet fever (050) ⁴	387	257	312	32d	68,812	56,352	79,965	53,121	39,913	57,421
Smallpox (084).....	-----	-----	1	35th	17	44	69	9	24	48
Tularemia (059).....	10	16	24	(1)	(1)	(1)	416	612	619	
Typhoid and paratyphoid fever (040,041) ⁵	79	109	124	11th	1,055	1,399	1,485	1,490	1,909	1,958
Whooping cough (056).....	1,338	2,602	2,519	39th	⁶ 67,140	103,338	86,815	⁶ 45,538	81,802	60,231

¹ Not computed. ² Data not available. ³ Deductions: Arkansas, weeks ended July 21 and July 28, 1 case each; Kentucky, week ended March 31, 1 case. ⁴ Including cases reported as streptococcal sore throat. ⁵ Including cases reported as salmonellosis. ⁶ Addition: Rhode Island, week ended July 28, 12 cases.

Reported Cases of Selected Communicable Diseases: United States, Week Ended August 4, 1951

[Numbers under diseases are International List numbers, 1948 revision]

Area	Diph- theria (055)	Encepha- litis, in- fectious (082)	Influ- enza (480-483)	Measles (085)	Mening- itis, men- ingococcal (057.0)	Pneumonia (490-493)	Polio- myelitis (080)
United States	56	42	250	2,708	79	615	1,203
New England	1		2	277	2	13	43
Maine.....			2	42		4	1
New Hampshire.....				5		1	9
Vermont.....				29	1		2
Massachusetts.....	1			136			19
Rhode Island.....				26			
Connecticut.....				39	1	8	12
Middle Atlantic	3	19		616	9	45	117
New York.....	1	17	(1)	330	4		65
New Jersey.....		1		155		18	17
Pennsylvania.....	2	1		131	5	27	35
East North Central	1	4	8	635	14	50	235
Ohio.....				109	6		37
Indiana.....			6	5	1	2	10
Illinois.....		1		181	4	33	81
Michigan.....	1	3	2	56	2	15	73
Wisconsin.....				284	1		34
West North Central	4	3		139	9	85	123
Minnesota.....	3	1		11	3	4	28
Iowa.....				20	2		14
Missouri.....				55	1	2	12
North Dakota.....		1		24		77	5
South Dakota.....				4			5
Nebraska.....				14			23
Kansas.....	1	1		11	3	2	36
South Atlantic	16	5	102	297	14	141	115
Delaware.....				2			1
Maryland.....		3	1	147		22	1
District of Columbia.....				7		13	4
Virginia.....	1		53	60	4	18	11
West Virginia.....	1			7	3		9
North Carolina.....	3			14	2		21
South Carolina.....	7		5	1		2	3
Georgia.....	1	2	43	20	3	86	49
Florida.....	3			39	2		16
East South Central	9	2	1	64	6	45	126
Kentucky.....	5			21	2		15
Tennessee.....	1	1		28	4		30
Alabama.....	2	1		12		24	43
Mississippi.....	1		1	3		21	38
West South Central	15	4	42	156	15	176	201
Arkansas.....			18	23	2	32	23
Louisiana.....	5		3	5	3	20	34
Oklahoma.....			21	8		5	52
Texas.....	10	4		120	10	119	92
Mountain	3	1	87	131		20	111
Montana.....			17	41			2
Idaho.....				4			
Wyoming.....	1			12			9
Colorado.....	1		3	16		12	71
New Mexico.....				6		3	2
Arizona.....	1		67	28		5	3
Utah.....		1		23			23
Nevada.....				1			1
Pacific	4	4	8	393	10	40	132
Washington.....			3	19	2		8
Oregon.....	1			50		8	14
California.....	3	4	5	324	8	32	110
Alaska						1	
Hawaii				39			1

¹ New York City only.

Anthrax: California and Kentucky, 1 case each.

Reported Cases of Selected Communicable Diseases: United States, Week Ended August 4, 1951—Continued

[Numbers under diseases are International List numbers, 1948 revision]

Area	Rocky Mountain spotted fever (104)	Scarlet fever ¹ (050)	Small-pox (084)	Tularemia (059)	Typhoid and paratyphoid fever ² (040, 041)	Whooping cough (056)	Rabies in animals
United States	21	387	-----	10	79	1,338	82
New England	25	25	-----	-----	3	79	-----
Maine.....	-----	-----	-----	-----	-----	12	-----
New Hampshire.....	-----	4	-----	-----	-----	6	-----
Vermont.....	-----	-----	-----	-----	-----	11	-----
Massachusetts.....	-----	16	-----	-----	2	43	-----
Rhode Island.....	-----	1	-----	-----	-----	1	-----
Connecticut.....	-----	4	-----	-----	1	6	-----
Middle Atlantic	1	100	-----	-----	6	171	16
New York.....	-----	79	-----	-----	-----	67	12
New Jersey.....	-----	6	-----	-----	-----	53	-----
Pennsylvania.....	1	15	-----	-----	5	51	4
East North Central	1	74	-----	-----	5	196	11
Ohio.....	-----	24	-----	-----	3	39	-----
Indiana.....	-----	2	-----	-----	1	32	9
Illinois.....	1	12	-----	-----	1	27	-----
Michigan.....	-----	27	-----	-----	-----	43	1
Wisconsin.....	-----	9	-----	-----	-----	55	1
West North Central	-----	29	-----	-----	6	81	9
Minnesota.....	-----	2	-----	-----	-----	2	-----
Iowa.....	-----	2	-----	-----	-----	17	3
Missouri.....	-----	2	-----	-----	3	21	5
North Dakota.....	-----	-----	-----	-----	-----	3	-----
South Dakota.....	-----	19	-----	-----	-----	-----	-----
Nebraska.....	-----	1	-----	-----	-----	3	1
Kansas.....	-----	3	-----	-----	3	35	-----
South Atlantic	15	33	-----	4	12	237	17
Delaware.....	-----	-----	-----	-----	-----	-----	-----
Maryland.....	2	6	-----	-----	-----	12	-----
District of Columbia.....	-----	-----	-----	-----	-----	17	-----
Virginia.....	6	2	-----	4	1	31	3
West Virginia.....	1	7	-----	-----	3	40	-----
North Carolina.....	5	11	-----	-----	3	57	-----
South Carolina.....	-----	4	-----	-----	-----	5	11
Georgia.....	1	-----	-----	-----	5	38	3
Florida.....	-----	3	-----	-----	-----	37	-----
East South Central	2	27	-----	2	16	93	9
Kentucky.....	1	6	-----	-----	3	33	-----
Tennessee.....	1	12	-----	2	3	35	2
Alabama.....	-----	4	-----	-----	8	12	5
Mississippi.....	-----	5	-----	-----	2	13	2
West South Central	1	14	-----	3	17	316	20
Arkansas.....	1	1	-----	2	5	14	4
Louisiana.....	-----	2	-----	-----	4	-----	-----
Oklahoma.....	-----	2	-----	-----	1	46	1
Texas.....	-----	9	-----	1	7	256	15
Mountain	1	9	-----	1	4	101	-----
Montana.....	-----	-----	-----	-----	-----	11	-----
Idaho.....	-----	3	-----	-----	2	3	-----
Wyoming.....	-----	-----	-----	1	-----	1	-----
Colorado.....	-----	2	-----	-----	2	17	-----
New Mexico.....	-----	2	-----	-----	-----	20	-----
Arizona.....	-----	-----	-----	-----	-----	42	-----
Utah.....	1	2	-----	-----	-----	7	-----
Nevada.....	-----	-----	-----	-----	-----	-----	-----
Pacific	-----	76	-----	-----	10	64	-----
Washington.....	-----	5	-----	-----	-----	7	-----
Oregon.....	-----	2	-----	-----	-----	4	-----
California.....	-----	69	-----	-----	10	53	-----
Alaska.....	-----	-----	-----	-----	-----	5	-----
Hawaii.....	-----	-----	-----	-----	1	-----	-----

¹ Including cases reported as streptococcal sore throat. ² Including cases reported as salmonellosis.

Rabies in Man: Georgia, 1 case.

FOREIGN REPORTS

CANADA

Reported Cases of Certain Diseases, Week Ended July 21, 1951

Disease	Total	New-found-land	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Sas-katchewan	Al-bertha	British Columbia
Brucellosis	4					3			1		
Chickenpox	514	4		22		76	244	29	26	79	34
Diphtheria	4	2				1			1		
Dysentery:							1				
Amebic	1										
Bacillary	12					4		1			7
Encephalitis, infectious	1						1				
German measles	78			2		4	33		3	12	24
Influenza	4			4							
Measles	529	25		58	3	118	57	28	16	133	91
Meningitis, meningococcal	2								2		
Mumps	213	10		1		31	74	11	7	12	67
Poliomyelitis	37			4		2	24	1	2	1	3
Scarlet fever	83					20	17	23	6	8	9
Tuberculosis (all forms)	203			1	9	52	21	17	9	14	80
Typhoid and paratyphoid fever	7	1				5					1
Veneral diseases:											
Gonorrhoea	276	5		4	14	53	53	18	23	55	51
Syphilis	99	2		5	9	40	18	4	8	3	10
Primary	15				3	5	6	1			
Secondary	5					2	1		1	1	
Other	79	2		5	6	33	11	3	7	2	10
Whooping cough	108			7		35	30	5	14	11	6

*Week Ended July 7, 1951**

Disease	Total	New-found-land	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Sas-katchewan	Al-bertha	British Columbia
Brucellosis	3					2	1				
Chickenpox	622	2		21		44	323	18	45	66	103
Diphtheria	2						1				1
Dysentery, bacillary	2										2
Encephalitis, infectious	2						2				
German measles	95			11		14			4	16	50
Influenza	27			25	1			1			
Measles	858	4		61	8	208	145	27	19	226	160
Meningitis, meningococcal	3	1					1	1			
Mumps	307	9		4		32	130	5	30	21	76
Poliomyelitis	30			8		2	19				1
Scarlet fever	181	1				34	36	24	14	39	33
Tuberculosis (all forms)	253	13		2	13	132	26	20	9	18	20
Typhoid and paratyphoid fever	9					5				1	3
Veneral diseases:											
Gonorrhoea	250	11		2	11	58	40	27	12	41	48
Syphilis	93	3		3	3	56	18	1	2	1	6
Primary	10				2	7			1		
Secondary	1					1					
Other	82	3		3	1	48	18	1	1	1	6
Whooping cough	119	1			1	44	33	6	3	10	21

*Delayed report.

FINLAND

Reported Cases of Certain Diseases—June 1951

Disease	Cases	Disease	Cases
Diphtheria.....	58	Typhoid fever.....	2
Dysentery.....	1	Veneral diseases:	
Meningitis, meningococcal.....	9	Gonorrhoea.....	426
Paratyphoid fever.....	37	Syphilis.....	20
Polio-myelitis.....	3	Other forms.....	3
Scarlet fever.....	1,732		

NEW ZEALAND

Reported Cases of Certain Diseases and Deaths for 2 Periods

4 Weeks Ended May 26, 1951

Disease	Cases	Deaths	Disease	Cases	Deaths
Brucellosis.....	5		Influenza.....	1	
Diphtheria.....	6		Meningitis, meningococcal.....	6	1
Dysentery:			Polio-myelitis.....	4	
Amebic.....	12		Puerperal fever.....	2	
Bacillary.....	5		Scarlet fever.....	80	
Encephalitis, infectious.....	2		Trachoma.....	2	
Erysipelas.....	10		Tuberculosis (all forms).....	167	33
Food poisoning.....	2		Typhoid fever.....	6	

5 Weeks Ended June 30, 1951

Disease	Cases	Deaths	Disease	Cases	Deaths
Brucellosis.....	2		Malaria.....	1	
Diphtheria.....	10		Meningitis, meningococcal.....	13	2
Dysentery:			Polio-myelitis.....	2	
Amebic.....	8		Scarlet fever.....	111	
Bacillary.....	15		Tetanus.....	5	4
Encephalitis, infectious.....	2		Tuberculosis (all forms).....	199	72
Erysipelas.....	19	1	Typhoid fever.....	6	
Food poisoning.....	11				

REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

The following reports include only items of unusual incidence or of special interest and the occurrence of these diseases, except yellow fever, in localities which had not recently reported cases. All reports of yellow fever are published currently. A table showing the accumulated figures for these diseases for the year to date is published in the PUBLIC HEALTH REPORTS for the last Friday in each month.

Cholera

India (French). During the period July 11–20, 1951, nine cases of cholera were reported in the seaport of Pondicherry.

Pakistan. For the week ended July 28, 1951, 14 imported cases of cholera were reported in Chittagong.

Smallpox

India (French). During the period July 11–20, 1951, smallpox was reported in French India as follows: Karikal, 23 cases; Mahe, 2; and Pondicherry, 1.

August 24, 1951

Indochina. Smallpox was reported for the week ended July 28, 1951, in three ports of Viet Nam as follows: Nam Dinh, nine cases; Haiphong, eight; and Hanoi, three.

Indonesia. For the week ended July 14, 1951, three cases of smallpox were reported in Bandjarmasin, Borneo, and for the week ended July 21, five cases were reported in Surabaya, Java.

Sierra Leone. One case of smallpox was reported in Sierra Leone for the week ended June 23, 1951. This is the first case since the week ended April 14.

Yellow Fever

Cameroon (French). A suspected fatal case of yellow fever was reported in Mora in the Region of Margui-Wandala. This is the first case for this area.

Costa Rica. Three cases of jungle yellow fever have been reported in three separate areas in the Province of Limon which is near the border of Panama. One case was reported on June 2, in Sixaola; one fatal case on July 23, in Trebol, La Estrella; and one fatal case on July 27, in Cayuga, Pococi. This indicates further extension of jungle yellow fever along the Caribbean coastal area from the Republic of Panama.

Gold Coast. During the period July 2-26, nine suspected cases of yellow fever were reported as follows: July 2, one case in Kpandu; July 11, one in Lartch; July 11-12, two in Brenase; July 12, one in the seaport of Winneba; July 15, one in Kpandu; July 18, one in Lartch; July 19, one in Kibi; and July 26, one in Akwatia.

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